

# VERTEK

## CONESIPPER® WATER / GAS SAMPLER



### MULTI-LEVEL SAMPLING DURING CPT PENETRATIONS

- ▶ **SIMULTANEOUS IN-LINE SAMPLING** - The VERTEK ConeSipper® module attaches directly behind a standard CPT cone to obtain gas or water samples as the CPT probe is advanced, saving substantial money and time by eliminating duplicate soundings. Developed and patented by Westinghouse Savannah River Corporation (WSRC) and Applied Research Associates, Inc., the ConeSipper® is manufactured by VERTEK under an exclusive license to WSRC.
- ▶ **SYSTEM DESCRIPTION** - The ConeSipper® module contains a two stage stainless steel filtration system, an integrated pneumatic valve system, and an 80-ml stainless steel sample chamber. Dual PFA Teflon pneumatic lines to the surface provide valve control and a non-absorptive conduit to bring the sample to the surface from depths of more than 200 feet. A small pneumatic control box on the surface meters the flow of inert gas to the module, controls the rate of sample collection, and allows the ConeSipper® to be purged and decontaminated down-hole.
- ▶ **HIGH QUALITY SAMPLES** - The ConeSipper® uses a dual filtration system to obtain samples that are generally free of fine content. The primary filter prevents sand from entering the ConeSipper®, and a secondary filter, located beneath the primary filter, removes clay and silt particles. The ConeSipper® does not expose samples to a vacuum, which can strip volatile compounds from the sample, this ensures more representative samples.

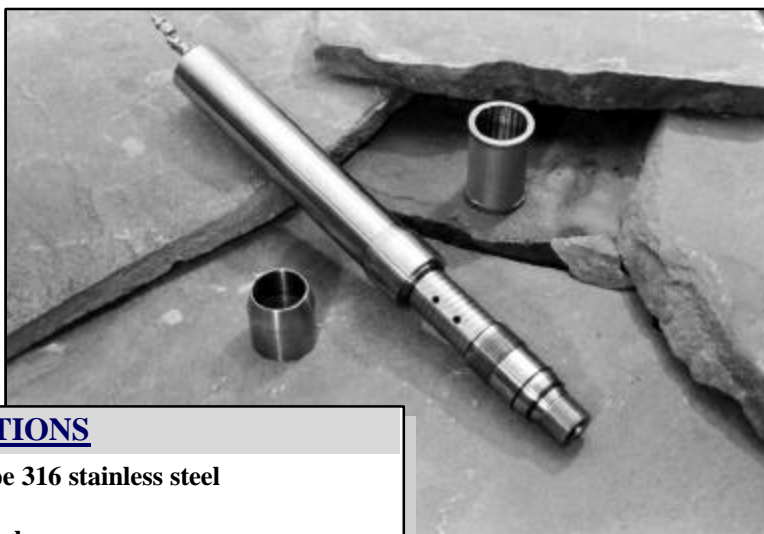


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- ▶ **DURABLE** - Durability and simplicity are key design elements of the ConeSipper® and the result is a high quality retrieval tool engineered for the demanding environment of CPT. The ConeSipper® body is made from specially treated, high-strength stainless steel to withstand the push forces of a 30-ton CPT truck, and the industrial grade pneumatic valves are much more robust and reliable than sensitive electrically actuated systems.
- ▶ **SIMPLE OPERATION** - The sample flows into the chamber under ambient pressure through a check valve that prevents backflow from the chamber. Once the ConeSipper® is full, gas pressure is applied through one of two pneumatic control tubes and the fluid is pushed up to the surface through the second tube. The control panel provides operational control and compressed inert gases can be used to maintain strict sample quality standards. Both filters can be removed for cleaning or replacement without disassembling the ConeSipper® from the CPT probe, greatly improving production rates.
- ▶ **FAST, COST-EFFECTIVE MULTI-LEVEL SAMPLING** – Remote (water or gas) flushing of the ConeSipper® internal chamber is a significant advantage over other CPT sampling tools as samples can be obtained from multiple depths without returning to the surface for cleaning. A rinsing fluid (e.g., distilled water) can also be ejected through the filtration system, allowing the operator to verify decontamination of the sampler by checking the cleanliness of the flush fluid, afterwards the probe can be pushed to the next sample depth. This capability is a significant economic advantage on jobs that require interval sampling.



### SPECIFICATIONS

✧ MATERIAL:	Type 316 stainless steel
✧ CHAMBER VOLUME:	80 ml
✧ PRIMARY FILTERS:	51 to 254 micron (stainless steel)
✧ SECONDARY FILTERS:	40 to 100 micron (sintered stainless) 38 to 74 micron (stainless screen)



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